

(FILE 'USPAT' ENTERED AT 14:14:23 ON 27 MAY 1999)

L1 30761 S POLYOLEFIN
L2 5750 S L1 AND (CYCLIC OR CYCLOHEXANE OR NORBORNENE)
L3 199 S L2 AND TONER
L4 728 S L2 AND POLYOLEFIN(P) (CYCLIC OR CYCLOHEXANE OR NORBORNENE)
)
L5 10 S L4 AND TONER
L6 199 S L3 AND TONER(P) L2
L7 199 S L2(P) TONER
L8 376 S POLYOLEFIN(P) TONER
L9 0 S L8 AND POLYOLEFIN(P) (CYCLIC OR CYCLOHEXANE OR NORBORNENE)
L10 143 S POLYOLEFIN(P) DEVELOPER
L11 2 S L10 AND POLYOLEFIN(P) (CYCLIC OR CYCLOHEXANE OR NORBORNENE)
E)
L12 1 S L8 AND POLYOLEFIN (P) (CYCLIC OR CYCLOHEXANE OR NORBORNENE)
NE)

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(FILE 'HOME' ENTERED AT 13:50:30 ON 27 MAY 1999)

FILE 'CAPLUS' ENTERED AT 13:50:35 ON 27 MAY 1999

L1 20489 S TONER

L2 472 S L1 AND (POLYOLEFIN OR OLEFIN)

L3 2 S L2 AND (CYCLIC OR CYCLOHEXANE OR NORBORENE)

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L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 1999 ACS
AN 1998:485241 CAPLUS
DN 129:128961
TI **Toner** for electrostatic image development containing
polyolefin resin having **cyclic** structure
IN Nishioka, Toshimi; Fukuzawa, Junichi; Nakamura, Toru; Arai, Satoshi;
Hoga, Takuya; Arai, Masayuki; Land, Horst-tore; Osan, Frank; Wehrmeister,
Thomas
PA Hoechst Research & Technology Japan Ltd., Japan
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM G03G009-087
ICS G03G009-08; G03G009-12
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9829783	A1	19980709	WO 97-JP4848	19971225
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9878926	A1	19980731	AU 98-78926	19971225
PRAI	JP 96-348546		19961226		
	WO 97-JP4848		19971225		

AB A **toner** for electrostatic image development which has a wide nonoffset temp. range sufficient for practical use and can attain sufficient fixability even in high-speed copying. The **toner** comprises mainly a binder resin, a colorant, a functional additive, and a charge control agent. The binder resin comprises one or more **polyolefin** resins which have **cyclic** structures and consist of a resin or resin fraction having a no.-av. mol. wts. (Mn) smaller than 7,500 as measured by GPC and another resin or resin fraction having a GPC no.-av. mol. wt. of 7,500 or higher. In the **polyolefin** resin having a **cyclic** structure, the content of a resin or resin fraction having an intrinsic viscosity (i.v) of 0.25 dL/g or higher, a GPC no.-av. mol. wt. (Mn) of 7,500 or higher, and a GPC wt.-av. mol. wt. (Mw) of 15,000 or higher is lower than 50 wt.% based on the whole binder resin.

ST electrophotog **toner polyolefin** binder

IT Acrylic polymers, uses

RL: DEV (Device component use); USES (Uses)

(styrene-contg.; **toner** for electrostatic image development
contg. **polyolefin** resin having **cyclic** structure)

IT Electrophotographic toners

(**toner** for electrostatic image development contg.
polyolefin resin having **cyclic** structure)

IT Ionomers
Polyesters, uses
Polyolefins
RL: DEV (Device component use); USES (Uses)
(toner for electrostatic image development contg.
polyolefin resin having cyclic structure)

IT 188364-55-8, MC 100 (acrylic polymer) 188364-56-9, Taftone NE 2155
188364-68-3, T 745 188364-70-7, T 745CL 188364-71-8, T 745MO
210235-72-6, MT 845 210235-79-3, MT 849 210235-80-6, MT 854
RL: DEV (Device component use); USES (Uses)
(toner for electrostatic image development contg.
polyolefin resin having cyclic structure)

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 1999 ACS
AN 1997:247859 CAPLUS
DN 126:231505
TI Hot-roller-fixing toner for developing electrostatically charged
images
IN Nakamura, Toru; Nishioka, Toshimi; Hoga, Takuya; Kurokawa, Nobuyuki;
Fukuzawa, Junichi; Land, Horst-tore; Helmer-metzmman, Fredy
PA Hoechst Industry Limited, Japan; Nakamura, Toru; Nishioka, Toshimi; Hoga,
Takuya; Kurokawa, Nobuyuki; Fukuzawa, Junichi; Land, Horst-Tore;
Helmer-Metzmman, Fredy
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM G03G009-087
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9705529	A1	19970213	WO 96-JP2133	19960729
	W: CA, CN, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE	JP 09101631	A2	19970415	JP 95-354063	19951229
	CA 2228506	AA	19970213	CA 96-2228506	19960729
	EP 843223	A1	19980520	EP 96-925122	19960729
	R: DE, ES, FR, GB, IT, NL, SE, IE				
	CN 1201533	A	19981209	CN 96-196905	19960729
PRAI	JP 95-216751		19950802		
	JP 95-354063		19951229		
	WO 96-JP2133		19960729		
AB	A hot-roller-fixing toner for developing electrostatically charged images which mainly comprises a binder resin, a colorant and a charge control agent, characterized in that the binder resin at least comprises a polyolefin resin having a cyclic structure and contains less than 50 wt.% of a polyolefin resin having a cyclic structure, satisfying the relation: intrinsic viscosity .gtoreq. 0.25 dL/g and HDT (heat deformation temp. according to DIN53461-B) .ltoreq. 70.degree. and exhibiting a no.-av. mol. wt. of 7500 or above and a wt.-av. mol. wt. of 15,000 or above as detd. by GPC. This toner is excellent in fixation, light transmittance and inhibition of spent toner generation and can give clear and high-quality images. Further, the toner is applicable to dry single-component magnetic toners, dry single-component nonmagnetic toners, dry two-component toners and liq. toners.				
ST	polyolefin hot roller fixing electrostatog toner				
IT	Polyesters, uses Polyolefins RL: TEM (Technical or engineered material use); USES (Uses) (hot-roller-fixing electrostatog. toners contg.)				

IT Electrographic toners
Electrophotographic toners
(polyolefin resins for hot-roller-fixing)
IT 188364-55-8, MC 100 (acrylic polymer) 188364-56-9, Taftone NE 2155
188364-67-2, S 8007 188364-68-3, T 745 188364-70-7, T 745CL
188364-71-8, T 745MO
RL: TEM (Technical or engineered material use); USES (Uses)
(hot-roller-fixing electrostatog. toners contg.)

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(FILE 'HOME' ENTERED AT 14:05:38 ON 27 MAY 1999)

FILE 'REGISTRY' ENTERED AT 14:05:41 ON 27 MAY 1999

	E T745/CN
	E T 745/CN
L1	1 S E3
	E S 8007/CN
L2	1 S E3
	E T 745MO/CN
L3	1 S E3
	E T 745CL/CN
L4	1 S E3

FILE 'CAPLUS' ENTERED AT 14:08:18 ON 27 MAY 1999

L5	3 S L1 OR L2
L6	3 S L3 OR L4
L7	3 S L5 OR L6

L7 ANSWER 1 OF 3 CAPLUS COPYRIGHT 1999 ACS
 AN 1998:485241 CAPLUS
 DN 129:128961
 TI Toner for electrostatic image development containing polyolefin resin
 having cyclic structure
 IN Nishioka, Toshimi; Fukuzawa, Junichi; Nakamura, Toru; Arai, Satoshi;
 Hoga, Takuya; Arai, Masayuki; Land, Horst-tore; Osan, Frank; Wehrmeister,
 Thomas
 PA Hoechst Research & Technology Japan Ltd., Japan
 SO PCT Int. Appl., 24 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 IC ICM G03G009-087
 ICS G03G009-08; G03G009-12
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9829783	A1	19980709	WO 97-JP4848	19971225
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9878926	A1	19980731	AU 98-78926	19971225
PRAI	JP 96-348546		19961226		
	WO 97-JP4848		19971225		

AB A toner for electrostatic image development which has a wide nonoffset
 temp. range sufficient for practical use and can attain sufficient
 fixability even in high-speed copying. The toner comprises mainly a
 binder resin, a colorant, a functional additive, and a charge control
 agent. The binder resin comprises one or more polyolefin resins which
 have cyclic structures and consist of a resin or resin fraction having a
 no.-av. mol. wts. (Mn) smaller than 7,500 as measured by GPC and another
 resin or resin fraction having a GPC no.-av. mol. wt. of 7,500 or higher.
 In the polyolefin resin having a cyclic structure, the content of a resin
 or resin fraction having an intrinsic viscosity (i.v) of 0.25 dL/g or
 higher, a GPC no.-av. mol. wt. (Mn) of 7,500 or higher, and a GPC wt.-av.
 mol. wt. (Mw) of 15,000 or higher is lower than 50 wt.% based on the

whole

binder resin.
 ST electrophotog toner polyolefin binder
 IT Acrylic polymers, uses
 RL: DEV (Device component use); USES (Uses)
 (styrene-contg.; toner for electrostatic image development contg.
 polyolefin resin having cyclic structure)
 IT Electrophotographic toners
 (toner for electrostatic image development contg. polyolefin resin
 having cyclic structure)
 IT Ionomers
 Polyesters, uses
 Polyolefins

RL: DEV (Device component use); USES (Uses)
 (toner for electrostatic image development containing polyolefin resin having cyclic structure)

IT 188364-55-8, MC 100 (acrylic polymer) 188364-56-9, Taftone NE 2155
 188364-68-3, T 745 188364-70-7, T 745CL
 188364-71-8, T 745MO 210235-72-6, MT 845 210235-79-3, MT 849
 210235-80-6, MT 854

RL: DEV (Device component use); USES (Uses)
 (toner for electrostatic image development containing polyolefin resin having cyclic structure)

L7 ANSWER 2 OF 3 CAPLUS COPYRIGHT 1999 ACS
 AN 1997:516049 CAPLUS
 DN 127:128699
 TI Coated electrophotographic carrier for developing electrostatically charged images
 IN Nakamura, Toru; Nishioka, Toshimi; Hoga, Takuya; Kurokawa, Nobuyuki; Fukuzawa, Junichi; Land, Horst-Tore; Helmer-Metzmann, Fredy
 PA Hoechst Aktiengesellschaft, Germany; Nakamura, Toru; Nishioka, Toshimi; Hoga, Takuya; Kurokawa, Nobuyuki; Fukuzawa, Junichi; Land, Horst-Tore; Helmer-Metzmann, Fredy
 SO PCT Int. Appl., 15 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 IC ICM G03G009-113
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9724644	A1	19970710	WO 96-JP2135	19960729
	W: CA, CN, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE	JP 09185185	A2	19970715	JP 95-354064	19951229
	CA 2228510	AA	19970710	CA 96-2228510	19960729
	EP 871073	A1	19981014	EP 96-925124	19960729
	R: DE, ES, FR, GB, IT, NL, SE, IE				
PRAI	JP 95-354064		19951229		
	WO 96-JP2135		19960729		

AB A coated carrier for developing electrostatically charged images which comprises a particulate core and a coating resin covering the core, is characterized in that the particulate core is coated with 1 to 30 wt.% of a coating resin which at least contains less than 50 wt.% of a polyolefin resin having a cyclic structure, satisfying the relationships: i.v. (intrinsic viscosity) .gtoreq. 0.25 dL/g and HDT (heat deformation temp. according to DIN53461-B) .gtoreq. 70.degree.C and exhibiting a no.-av. mol. wt. of 7500 or above and a wt.-av. mol. wt. of 15,000 or above as detd. by GPC. This coated carrier is effective in inhibiting the generation of spent toners in the development with dry toners and is excellent in charge control.

ST electrophotog carrier coated polyolefin

IT Electrophotographic carriers
 (electrophotog. carriers coated with polyolefin resin)

IT Polyolefins
 RL: TEM (Technical or engineered material use); USES (Uses)
 (electrophotog. carriers coated with polyolefin resin)

IT 118058-05-2, Lf 40 188364-67-2, s 8007 188364-68-3, t 745 188364-70-7, t 745CL 188364-71-8, t 745Mo
 RL: TEM (Technical or engineered material use); USES (Uses)
 (electrophotog. carriers coated with polyolefin resin)

L7 ANSWER 3 OF 3 CAPLUS COPYRIGHT 1999 ACS
 AN 1997:247859 CAPLUS

DN 126:231505
 TI Hot-roller-fixing toner for developing electrostatically charged images
 IN Nakamura, Toru; Nishioka, Toshimi; Hoga, Takuya; Kurokawa, Nobuyuki;
 Fukuzawa, Junichi; Land, Horst-tore; Helmer-metzmnn, Fredy
 PA Hoechst Industry Limited, Japan; Nakamura, Toru; Nishioka, Toshimi; Hoga,
 Takuya; Kurokawa, Nobuyuki; Fukuzawa, Junichi; Land, Horst-Tore;
 Helmer-Metzmnn, Fredy
 SO PCT Int. Appl., 15 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 IC ICM G03G009-087
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9705529	A1	19970213	WO 96-JP2133	19960729
	W: CA, CN, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				

SE	JP 09101631	A2	19970415	JP 95-354063	19951229
	CA 2228506	AA	19970213	CA 96-2228506	19960729
	EP 843223	A1	19980520	EP 96-925122	19960729
	R: DE, ES, FR, GB, IT, NL, SE, IE				
	CN 1201533	A	19981209	CN 96-196905	19960729
PRAI	JP 95-216751		19950802		
	JP 95-354063		19951229		
	WO 96-JP2133		19960729		

AB A hot-roller-fixing toner for developing electrostatically charged images
 which mainly comprises a binder resin, a colorant and a charge control
 agent, characterized in that the binder resin at least comprises a
 polyolefin resin having a cyclic structure and contains less than 50 wt.%
 of a polyolefin resin having a cyclic structure, satisfying the relation:
 intrinsic viscosity .gtoreq. 0.25 dL/g and HDT (heat deformation temp.
 according to DIN53461-B) .ltoreq. 70.degree. and exhibiting a no.-av.

mol. wt. of 7500 or above and a wt.-av. mol. wt. of 15,000 or above as detd.
 by

GPC. This toner is excellent in fixation, light transmittance and
 inhibition of spent toner generation and can give clear and high-quality
 images. Further, the toner is applicable to dry single-component

magnetic toners, dry single-component nonmagnetic toners, dry two-component toners
 and liq. toners.

ST polyolefin hot roller fixing electrostatog toner

IT Polyesters, uses
 Polyolefins

RL: TEM (Technical or engineered material use); USES (Uses)
 (hot-roller-fixing electrostatog. toners contg.)

IT Electrographic toners

Electrophotographic toners

(polyolefin resins for hot-roller-fixing)

IT 188364-55-8, MC 100 (acrylic polymer) 188364-56-9, Taftone NE 2155

188364-67-2, S 8007 188364-68-3, T 745

188364-70-7, T 745CL 188364-71-8, T 745MO

RL: TEM (Technical or engineered material use); USES (Uses)
 (hot-roller-fixing electrostatog. toners contg.)